217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

Adkins Energy, LLC
Attn: Todd Block
4350 West Galena Road
P.O. Box 227
Lena, Illinois 61048

Application No.: 03040053 I.D. No.: 177802AAA
Applicant's Designation: RTO Date Received: April 17, 2003
Subject: Spent Grain Dryer changes and Afterburner
Date Issued: March 12, 2004
Location: 4350 West Galena Road, Lena

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a revised feed drying system with afterburner as described in the above-referenced application. This permit is subject to standard conditions attached hereto and the following condition(s):

1.0 Feed Drying System and Afterburner

1.1 Description

A natural gas fired dryer will be used to prepare distillers dry grain and solubles (DDGS), a type of cattle feed, from wet cake produced by this ethanol plant. The dryer will be equipped with cyclones to control emissions of particulate matter (PM). An afterburner will be used to control emissions of carbon monoxide (CO), volatile organic material (VOM), and hazardous air pollutants (HAP). An existing Venturi scrubber, located between the cyclones and afterburner, may also be used to control particulate matter emissions. This control system will also control the associated feed cooler, which is exhausted through the dryer after passing through a baghouse for initial control of its particulate emissions.

This new dryer system replaces the original dryer system installed at the plant, which was not equipped with an afterburner or other combustion-type control device. The shells of the original dryer and cooler are used in the new dryer system but other changes will be made, such as changes to ductwork to facilitate increased air circulation.

The afterburner controlling the new dryer system will be a regenerative thermal oxidizer (RTO). In an RTO, heat recovered from the afterburner exhaust gases is used to preheat the incoming vent stream to reduce fuel consumption in the afterburner. This is done by alternating the direction of gas flow through ceramic beds located next to the combustion chamber.

Adkins also plans to use the new afterburner as the principal control device for the distillation process emissions that are currently treated by the distillation scrubber. The distillation scrubber will not be removed from the plant and will continue to be used during periods when the afterburner is not available. The new afterburner would also be used to control VOM and HAP emissions from the existing centrifuges, which are used to mechanically separate water from the solids in the whole stillage and produce the wet cake. This permit does not quantify the emission reductions that will occur, as compared to current operation, when these units are vented to the afterburner.

In addition to addressing regulatory requirements for the new equipment, the issuance of this permit also addresses source specific obligations placed on the Permittee to obtain a construction permit for changes to the feed dryer system and installation of the associated afterburner. (Agreed Order for Injunctive Relief, before the Circuit Court for the Fifteenth Judicial Circuit, Stephenson County, No. 03 CH 76.) The Agreed Order also places specific requirements on these units as well as requirements for other existing units at the plant and the plant as a whole.

1.2 List of Emission Units and Pollution Control Equipment

| Emission Unit Description | Emission Control Equipment |
|---|---|
| Feed Dryer | Cyclones, Venturi Scrubber, Afterburner |
| Feed Cooler (Baghouse) | |

1.3 Applicability Provisions and Applicable Regulations

a. An "affected unit" for the purpose of these conditions is an emission unit described in Conditions 1.1 and 1.2.

b. Affected units are subject to 35 IAC 212.321, which provide that:

> No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units … at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c).

c. Pursuant to 35 IAC 212.109 and 212.123(a), the emission of smoke or other particulate matter from the affected units shall not have an opacity greater than 30 percent. Compliance with this limit shall be determined by 6-minute

averages of opacity measurements in accordance with USEPA Reference Method 9.

1.4 Non-Applicability of Regulations of Concern

For the affected units, this permit does not address the applicability of 35 IAC 215.301 because the organic material emissions of the feed dryer are required to be controlled by greater than 85 percent, such that organic material emissions are less than 8.0 pounds/hour. (Refer to Condition 1.6(a) and (b))

1.5 Operational and Production Limits and Work Practices

a. i. Natural gas and bio gas from the bio-methanator shall be the only fuels fired in the feed dryer.

ii. The rated firing rate of the feed dryer shall not exceed 60 million Btu/hour.

iii. The feed dryer shall be equipped, operated, and maintained with low $NO_x$ combustors.

b. i. Natural gas shall be the only fuel fired in the afterburner.

ii. The rated firing rate of the afterburner shall not exceed 18 million Btu/hour.

c. i. During operation of the feed dryer, the key operating parameters of the feed dryer/control system shall be maintained at levels that are consistent with levels at which emission testing demonstrated compliance with applicable requirements, including the following:

A. Maximum temperature at inlet of feed dryer: °F

B. Minimum pressure drop across the cyclones: inches $H_2O$.

C. Minimum water flow rate of the scrubber (gallon per minute) and minimum pressure drop across the scrubber (inches $H_2O$), if the scrubber was operated during the emission test.

ii. During periods when feed is present in the dryer or emissions from other units are vented to the afterburner, the minimum afterburner combustion chamber temperature shall be maintained at a temperature that is consistent with the temperature at which emission testing demonstrated compliance with all applicable requirements.

iii. The combustion chamber of the afterburner shall be preheated to the manufacturer's recommended temperature or a temperature that is consistent with the most recent emission test in which compliance was demonstrated, prior to sending the wet cake to the feed dryer or venting other units to the afterburner.

iv. Notwithstanding the above, for the purpose of evaluation of the control system and further emission testing, the Permittee may operate the control system at different operating parameters (or operate without the Venturi scrubber in service) in accordance with a detailed plan describing the evaluation and testing program submitted to and approved by the Illinois EPA.

d. i. When feed is present in the dryer, the dryer shall be vented to the bypass stack for the afterburner only as necessary for operating safety, e.g., purge and reignition of the dryer/afterburner system in the event of a burner flameout or orderly shutdown of the dryer with removal of the feed from the dryer.

ii. Other units controlled by the afterburner shall be vented either to the afterburner or to their existing stacks.

e. i. During a scheduled shutdown of the feed dryer/afterburner, the transfer of the distillation process emissions to the distillation scrubber shall be accomplished prior to the shutdown of the afterburner.

ii. The Permittee shall maintain the distillation scrubber such that it can be readily operated to provide control of distillation process emissions, including periodic inspection and operation of the scrubber as needed to ensure ready availability of the scrubber to control the distillation process. Additional provisions or revised provisions for monitoring and recordkeeping for this scrubber may be included in subsequent permits based on actual operating data and experience.

f. The Permittee shall operate and maintain the feed dryer and associated control system in accordance with written procedures developed and maintained by the Permittee. These procedures shall provide for good air pollution control practices to minimize emissions and shall include the Permittee's standard operating procedures for startup, normal operation, and shutdown of the dryer system and

address likely malfunction and upsets events for the dryer system.

g. i. If the initial emission testing or subsequent testing of the feed dryer/afterburner, shows compliance with requirements for VOM emission by less than 20 percent of the permitted VOM emissions (e.g., afterburner control efficiency is only in the range of 95 to 96 percent) the Permittee shall implement a Control Improvement Program (Program) for the affected process with the objective of achieving compliance by a margin of at least 20 percent.

ii. The Permittee shall submit a copy of the Program to the Illinois EPA for its review and comments within 30 days after receiving test results that triggers this requirement for a Control Improvement Program (Program).

iii. A. If the emission testing demonstrated that the compliance margin was between 10 and 20 percent, the Program shall be completed in one year.

B. If the emission testing demonstrated the compliance margin was less than 10 percent, the Program shall be completed in six months.

C. Following completion of the Program, the Permittee shall again test VOM emissions from the affected unit.

h. The Permittee shall obtain a Construction Permit from the Illinois EPA prior to physically removing the existing Venturi scrubber from the control system for the feed dryer.

1.6 Emission Limitations

a. i. The VOM emissions from the feed dryer system shall be controlled by at least 95 weight percent or to a concentration of no more than 10 ppmv, whichever is less stringent.

ii. The CO emissions from the feed dryer system shall be controlled by at least 90 weight percent or to an outlet concentration of no more than 100 ppmv, whichever is less stringent.

Note: These limitations for the feed dryer system are established by the Agreed Order (Paragraph VIII.A.1(f)).

b. Emissions from the feed dryer/afterburner shall not exceed the following limits. These limits are based on information in the application, including the information from the dryer design and construction contractor based on previous dryer testing and proposed changes. These emission estimates include the maximum natural gas firing rates in the dryer and afterburner of 60 and 18 million Btu/hr, respectively. (See also Condition 1.12, addressing the Shakedown Period.)

| Pollutant | Limitation | |
|---|---|---|
| | (Lb/Hr) | (Ton/Yr) |
| $NO_x$ | 8.8 | 38.56 |
| CO | 9.5 | 41.61 |
| VOM | 4.0 | 17.52 |
| $PM_{10}$ | 7.5 | 32.85 |
| $SO_2$ | 7.5 | 32.85 |

c. i. This permit is issued based on the source not being a major source for Hazardous Air Pollutants (HAP), so that this source is not subject to the requirements of Section 112(g) of the federal Clean Air Act.

ii. A. The acetaldehyde emissions of the feed dryer/afterburner shall not exceed 0.5 lb/hr and 2.2 tons/yr.

B. The emissions of individual HAPs, other than acetaldehyde, from the feed dryer/afterburner shall not exceed 1.45 lb/hr and 6.35 tons/yr.

C. The emissions of total HAPs, other than acetaldehyde, from the feed dryer/afterburner shall not exceed 2.2 lb/hr and 9.65 tons/yr.

Note: The limits in Condition 1.6 have been established in conjunction with limits and requirements for other units at the plant and the plant as a whole established in Operating Permit 03060057 that are intended to ensure that the plant is not a major source for purposes of the federal rules for Prevention of Significant Deterioration (PSD) 40 CFR 52.21, and the federal National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR, Part 63.

1.7 Testing Requirements

a. Following the start-up of the feed dryer, the Permittee shall promptly have emission tests conducted as stated below, as follows, at its expense by an approved testing service while the feed dryer and cooler are operating at maximum dryer load and other representative operating conditions.

| E M I S S I O N S | | | | | Efficiency | |
|---|---|---|---|---|---|---|
| PM | VOM | $NO_x$ | CO | HAP | VOM | CO |
| | | | | | | |
| X** | X* | X | X* | X | X*** | X*** |

* If the afterburner is not designed to provide 1.0 seconds residence time at 1600°F in the combustion zone, emission testing shall be conducted under two operating scenarios to evaluate compliance with the minimum combustion chamber temperature and minimum residence time at which the Permittee intends to normally operate the afterburner.

** Particulate matter (PM) tests shall be accompanied by observations of opacity by Method 9, if not infeasible due to a steam plume, and by measurements of condensable particulate matter, as collected in the back half of the Method 5 sampling train or by separate measurements using USEPA Method 202 (40 CFR Part 51, Appendix M).

*** Following initial emission testing, VOM or CO efficiency testing need not be performed if the Permittee is demonstrating compliance based on the concentration of VOM or CO, respectively, in the exhaust.

i. Initial testing for carbon monoxide emissions shall be conducted by no later than 30 days following initial startup of the feed dryer. This test shall not be considered a compliance test for purposes of setting operating conditions that are applicable during subsequent operation of the dryer.

ii. Initial testing for emissions and control efficiency for volatile organic material (VOM), control efficiency for carbon monoxide (CO), emissions of particulate matter (PM), and hazardous air pollutants (HAPs) shall be conducted no later than 60 days following initial startup of the feed dryer. For this purpose, start-up of a feed dryer occurs on the day when wet feed is first introduced into the dryer or if the feed dryer is subsequently taken out of service for an extended period of time to address

safety concerns, when wet feed is next introduced into the dryer following such outage if expressly approved in writing by the Illinois EPA.

iii. Within 60 days after achieving the maximum daily production rate at which the feed dryer will be operated, but not later than 180 days after initial startup, initial testing for emissions of nitrogen oxide shall be conducted if not already performed in conjunction with the above testing. In addition, if the above testing was conducted with the dryer operating at a rate that is not representative of the maximum load at which the dryer will be operated, emission testing for VOM, CO, PM, and HAPs shall be repeated. Notwithstanding the above, this period of time may be extended by the Illinois EPA upon written request by the Permittee as needed to reasonably accommodate unforeseen difficulties in the shakedown and testing of the dryer.

iv. In addition to the emission testing required above, the Permittee shall perform emission tests as requested by the Illinois EPA for an emission unit within 45 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA.

b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the USEPA or Illinois EPA. Refer to 40 CFR 60, Appendix A, for USEPA test methods.

| | |
|---|---|
| Location of Sample Points | USEPA Method 1 |
| Gas Flow and Velocity | USEPA Method 2 |
| Flue Gas Weight | USEPA Method 3 |
| Moisture | USEPA Method 4 |
| Particulate Matter | USEPA Method 5 |
| Volatile Organic Material | USEPA Method 18 and 25/25A* |
| Carbon Monoxide | USEPA Method 10 |
| Nitrogen Oxides | USEPA Method 7, 7E, or 19 |
| Hazardous Air Pollutants | USEPA Method 18* |

* Testing shall also be conducted in accordance with the current USEPA industry-specific protocol and guidance for testing VOM and HAP emissions at ethanol plants.

c. The following measurements shall also be made during emission testing based on representative sampling and analysis:

i. Amount of water in wet cake as entering the dryer and in dry feed as leaving the dryer, lb water/lb material.

ii. Calculated amount of water removed in the feed dryer, lb/hour.

d. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Compliance Section of the Division of Air Pollution Control for review. This plan shall describe the specific procedures for testing, including as a minimum:

i. The person(s) who will be performing sampling and analysis and their experience with similar tests.

ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will address maximum dryer load and be representative of other operating conditions for the dryer system, including the control system, and the means by which the operating parameters for the emission unit and any control equipment will be determined. If the expected operating conditions during the testing change after the submittal of the plan, the Permittee shall promptly notify the Illinois EPA, providing a description and explanation of the change.

iii. The specific determinations of emissions and operation that is intended to be made, including sampling and monitoring locations.

iv. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods.

e. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing. Upon request, the Permittee shall provide a copy of raw data collected during emission test to Illinois EPA observer.

f. Copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test

results are compiled and finalized but no later than 30 days after completion of sampling. The Final Report shall include as a minimum:

i. A summary of results.

ii. General information.

iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.

iv. Detailed description of test conditions, including:

A. Plant operating rates, i.e., ethanol and feed production rate.

B. Dryer system operating information, i.e., feed rate, inlet and outlet temperatures.

C. Amount of water removed in the feed dryer, lb/hr, with supporting calculations.

D. Operating parameters of control system during testing.

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

g. Copies of emission test reports shall be retained for at least five years after the date that an emission test is superseded by a more recent test.

1.8 Monitoring Requirements

a. The Permittee shall install, operate, and maintain the following monitoring devices, which shall be operated at all times that the feed dryer is in operation. These devices shall record appropriate parameter at least every 15 minutes and this data and hourly average data shall both be recorded.

i. Inlet temperature and outlet temperature of the feed dryer.

ii. Differential pressure (pressure drop) across the cyclones.

iii. Water flow rate (gallons/minute) and differential pressure (pressure drop) across the scrubber. (See also Condition 1.5(h))

iv. Combustion chamber temperature of the afterburner.

b. The Permittee shall install, operate, and maintain devices to monitor the valve or damper position on the flow control devices directing the various exhaust streams to the afterburner, which shall be operated at all times that the plant is in operation. The position of these valves shall be monitored electronically by the plant operating system.

c. i. These devices shall be installed, operated, maintained and calibrated in accordance with good air pollution control practice for reliable operation and accurate data. The Permittee shall maintain logs for the maintenance and repair of these devices.

ii. The temperature monitor shall be maintained within an accuracy of 1 percent.

d. Notwithstanding Condition 1.8(a) as related to monitoring for the Venturi scrubber:

i. The Permittee shall commence monitoring for the Venturi scrubber one year after the initial startup of the dryer if the Venturi scrubber will be routinely operated after that date. During the period before monitoring is commenced, the Permittee shall keep records of flow and pressure drop at least once per shift, while the scrubber is in operation.

ii. If monitoring for the Venturi scrubber is commenced, the Permittee need not operate the monitoring devices for the scrubber if the Permittee is not operating the scrubber, provided that the Permittee keeps records of the time when the scrubber is removed from operation and the time it is returned to operation.

1.9 Recordkeeping Requirements

a. The Permittee shall maintain records of the following items:

i. Design information for the feed dryer/afterburner:

A. The design heat input of the feed dryer.

B. Moisture removal capacity, lb water/hour.

C. The design heat input of the afterburner, Btu/hr.

ii. Feed production as shipped (wet feed: tons/month, and dry feed: tons/month).

iii. Records for venting the feed dryer through the bypass stack and upsets in feed dryer operations or other operations that could generate additional emissions, with a description of the incident, explanation, and corrective actions and any preventative measures taken, and an estimate of the additional CO, VOM, PM and HAP emissions that occurred, with supporting calculations and background information.

iv. Records for measures taken to keep distillation scrubber ready, including the periodic inspection and operation of the scrubber.

v. Monthly and annual $NO_x$, CO, PM, $SO_2$, VOM and HAP emissions from the feed dryer/afterburner, with supporting calculations.

Note: For the purpose of these records, HAPs shall include acetaldehyde and other organic HAPs emitted from the dryer identified during emissions testing.

b. The Permittee shall keep the following logs:

i. An operation log and a log for inspection, maintenance, and repairs for the feed dryer and associated control system, including the time when feed is present in the dryer that the afterburner is not in operation, or the afterburner is bypassed.

ii. An operating log and a log for inspection, maintenance, and repairs for distillation process and centrifuges. The operating log shall include detailed information for each period when emissions are not vented to the afterburner, including the period of times when distillation emissions are vented through the bypass stack and through the distillation scrubber when operating at less than its full capability, if any.

c. All records, including logs and procedures, required by this permit shall be retained by the Permittee at readily and written procedures, accessible location at the source for at least three years from the date of entry and shall be available for inspection by the Illinois EPA upon request. Any records retained in electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection. The Permittee shall provide copies of any required records requested by the

Illinois EPA as soon as is practicable, considering the nature and extent of the requested records.

1.10 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA of any deviations from the requirements of this permit for the affected units as follows. These notifications shall include the information specified by Condition 1.10(b).

i. A. If there is an exceedance of applicable requirements for the afterburner, as determined by the monitoring required by Condition 1.8 that lasts longer than two hours, the Permittee shall immediately notify the Illinois EPA. The initial notification for such a deviation may be supplemented with additional information submitted within 7 days of the deviation, as needed to provide all information required by Condition 1.10(b).

B. The deviations addressed above and all other deviations from applicable requirements for the afterburner shall be reported with the quarterly compliance report. (See Condition 1.10(c))

ii. If there is any deviation of the requirements of this permit, not addressed by the above reporting requirements, as determined by the records required by this permit or by other means, the Permittee shall submit a report with the quarterly compliance report.

iii. Notwithstanding the above, if a deviation from the requirements of this permit will occur from required maintenance, repair or other activity that can be scheduled in advance, the Permittee shall also notify the Illinois EPA prior to undertaking such activity if it is feasible to do so. Such notification shall be submitted at least 5 days in advance unless the activity is scheduled less than 5 days in advance. This notification may be supplemented with additional information submitted within 7 days of the deviations, as needed to provide all information required by Condition 1.10(b).

b. Reports of deviations shall include the following information:

i. Identify the deviation, with date, time, duration and description.

ii. Describe the effect of the deviation on compliance, with an estimate of the excess emissions that accompanied the deviation, if any.

iii. Describe the probable cause of such deviations and any corrective actions or preventive measures taken:

c. Quarterly compliance report shall be submitted no later than 45 days after the preceding calendar quarter. This report shall also provide a listing of all deviations for which an individual notification was provided, but need not include copies of the previously submitted information. If there are no deviations during the calendar quarter, the Permittee shall still submit a compliance report, which report shall state that no deviations occurred during the reporting period

d. Two copies of required reports and notifications concerning equipment operation or repairs, performance testing, or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Enforcement Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

1.11 Compliance Procedures

a. Compliance with the emission limits in Condition 1.6(b) and (c) shall be based on equipment operation, as addressed by the records required by Conditions 1.8 and 1.9, and appropriate emission factors.

b. For VOM and CO emissions from the feed dryer/afterburner cooler, periods of excess emissions shall include any 1-hour period in which the average combustion chamber temperature, when process units controlled by the afterburner are operating, was more than 50°F below the temperature during testing that demonstrated compliance with applicable requirements. Additional provisions or revised provisions defining excess emissions may be included in subsequent permits based on actual operating data and experience.

1.12 Authorization to Operate

a. i. Under this permit, the feed drying system may be operated for a period of 180 days from initial startup of the feed dryer to allow for equipment shakedown and emission testing as required.

A. Notwithstanding the above, this period of time may be extended by the Illinois EPA upon written request by the Permittee as needed to reasonably accommodate unforeseen difficulties in the shakedown of the dryer system provided that results of initial emission testing for volatile organic material, carbon monoxide and particulate matter have been provided to the Illinois EPA.

B. For this purpose, startup of the feed drying system shall considered the first time that wet feed is processed in the dryer.

ii. Upon completion of all required initial emission testing, the feed drying system may be operated for an additional period of 45 days.

iii. Upon successful completion of emission testing of the feed drying system demonstrating compliance with applicable limitations, the Permittee may continue to operate the feed dryer and associated equipment for additional period of 180 days.

Note: These provisions do not authorize operation in violation of applicable emission limits and control requirements, including provisions of the Agreed Order. In addition, the Agreed Order requires the Permittee to apply for a revision of its operating permit to incorporate provisions applicable to the feed dryer system within 180 days following the initial startup of the dryer (Agreed Order, Paragraph VIII.A.9).

b. i. The afterburner shall be designed so that an initial startup and basic shakedown of the afterburner can be completed before initial startup of the new feed dryer and cooler.

ii. The shakedown of the afterburner for control of emissions from the distillation process and the centrifuges shall not be begun until reliable operation of the feed dryer and afterburner has been demonstrated. During this shakedown, if necessary to

provide for immediate availability of the scrubber during upset of the afterburner, the Permittee shall continue to operate the distillation scrubber at a minimum level until such time as shakedown is completed and reliable operation of the feed dryer, distillation process and afterburner have been demonstrated.

c. i. The specific operating requirements in Condition 1.5(c) and the hourly emission limitations in Condition 1.6(b) are not effective during shakedown of the feed dryer/afterburner. During shakedown of the feed dryer, the Permittee shall operate the feed dryer and associated control equipment to the extent reasonably practicable to control emissions. The emissions of the feed dryer/afterburner shall not exceed the following limitations during each day and calendar month. For this purpose, unless extended in writing by the Illinois EPA based on a showing by the Permittee, the shakedown period shall end on the last day of the fifth month after the feed dryer first processes wet cake or the date that the results of required emissions testing are submitted (or are required to be submitted), whichever occurs first.

| Pollutant | Limitations | |
|---|---|---|
| | (Lb/Day) | (Ton/Month) |
| $NO_x$ | 192 | 2.98 |
| CO | 228 | 3.53 |
| VOM | 96 | 1.49 |
| $PM_{10}$ | 180 | 2.79 |
| $SO_2$ | 180 | 2.79 |
| Acetaldehyde | 24 | 0.37 |

ii. If the Permittee elects to propose different limits for the feed dryer for particulate matter emissions based on the results of emission testing, as addressed by the Agreed Order (Paragraph VIII.A.8), such proposal shall be submitted no later than 45 days after the date of initial testing required for particulate matter emissions.

iii. The effectiveness of Condition 1.6(a) is governed by the Agreed Order, which requires compliance to be shown following requisite emission testing or 180 days following initial startup of the dryer, whichever occurs first (Agreed Order, Paragraphs VIII.A.7 and 10)

d. Notification and Reporting

i. A. The Permittee shall provide the Illinois EPA 30 days advance notification prior to initial

start-up of the feed dryer/afterburner to allow for inspection by the Illinois EPA.

B. If natural gas will be fired in the feed dryer/afterburner for purpose other than burner tuning and drying and curing of refractory prior to first introducing feed, the Permittee shall provide prior notification of such activity, with description and explanation.

ii. The Permittee shall provide the Illinois EPA immediate notification of any event(s) that disrupts the orderly shakedown of the feed dryer/afterburner.

iii. During the shakedown of the feed dryer/afterburner the Permittee shall provide monthly progress reports to the Illinois EPA that include the following:

A. Overall operating level (gallons ethanol produced), feed production, and percent feed dried;

B. Emissions from the feed dryer/afterburner, with supporting calculations;

C. Activities accomplished/significant events;

D. Current schedule for emission testing;

E. A summary of any emission measurements conducted at the plant; and

F. Outreach activities planned/provided for local communities or interested parties.

iv. The Permittee shall provide the Illinois EPA notice as to when shakedown of the feed dryer/afterburner is considered complete.

1.13 a. This approval to construct does not relieve the Permittee of the responsibility to comply with all Local, State and Federal Regulations which are part of the applicable Illinois State Implementation Plan, as well as all other applicable Federal, State and Local requirements.

b. In particular, this permit does not excuse the Permittee from the obligation to undertake further actions at the source as may be needed to eliminate air pollution, including nuisance due to odors, such as raising the height of stacks, installing back-up control system, or altering process conditions in the dryer. Such actions may become necessary or desirable following completion of the odor

assessment for the feed dryer required by the Agreed Order (Paragraph VIII.A.19).

If you have any questions on this permit, please call Minesh Patel at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:MVP:jar

cc: Region 2
Compliance and Enforcement Section
Lotus Notes